

PUJX 19.040  
09/964,900REMARKS

This amendment is in response to the Examiner's Office Action dated 4/6/2005. On page 5 of the office action of 04/06/2005, the examiner has indicated claim 5 would be allowable if rewritten in independent form. Applicant has rewritten claim 5 in independent form by incorporating limitations of independent claim 1. Applicant wishes to note that claim 5 has been amended without adding new matter as the amended matter was previously presented in independent claim 1.

Applicant is appreciative of the recognized allowable subject matter. This amendment should obviate outstanding issues and make the remaining claims allowable. Reconsideration of this application is respectfully requested in view of the foregoing amendment and the remarks that follow.

STATUS OF CLAIMS

Claims 1-6 are pending.

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-4 and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zuranski et al. (USP 6,430,219) in view of Murphy et al. (USP 6,856,683).

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In the Drawings:

None

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09/964,900OVERVIEW OF CLAIMED INVENTION

The presently claimed invention analyzes a reception result of an analog signal transmitted from a local switch to a subscriber line (e.g., analyzes a voltage difference corresponding to a line current) and evaluates, prior to a start of a provision of a broadband communication service, a transmission characteristic in the subscriber line based on the analyzed result. The transmission characteristic is sent to a network through an analog transmitting unit. Noises having power of a predetermined threshold value or more are detected from a data signal input to a digital transmitting unit, and a periodicity of the noises is examined, whereby influences of the cyclic noises are evaluated, and an examination result is sent to the network by use of the function of the analog transmitting unit. According to the present invention, the xDSL modem is capable of automatically collecting (at the subscriber's side) various characteristics of the subscriber line connected thereto prior to a start of a provision of a broadband communication service.

In the Claims

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant has rewritten claim 5 in independent form by incorporating limitations of independent claim 1.

REJECTIONS UNDER 35 U.S.C. § 103

Claims 1-4 and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zuranski et al. (USP 6,430,219) in view of Murphy et al. (USP 6,856,683). To be properly rejected under 35 U.S.C. § 103(a), each and every element of the claims must be addressed

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through known prior art or be recognized as an obvious variation thereof. Applicant contends that the combination of the Zuranski and Murphy references fail to provide many of the limitations of applicant's pending claims.

Zuranski et al. teach a digital subscriber line modem that comprises a memory, a data line access coupled to a subscriber line, an equalizer (coupled to the data line access) having a response in accordance with equalizer control signals; and a line characterization circuit (coupled to the equalizer) receiving a test signal on the subscriber line when the subscriber line has a particular parameter (the particular parameter involving unhooking a telephone coupled to the subscriber line, a particular time of day, or both), wherein the line characterization circuit analyzes the test signal to generate the equalizer control signals and stores the equalizer control signals with respect to the particular parameter in the memory.

Murphy et al. teaches a method for reducing noise from a non-linear device that shares a customer loop with a splitterless ADSL modem. Murphy et al.'s method includes measuring a current noise characteristic for the customer loop, wherein the current noise characteristic is measured by the modem and the modem makes a determination as to whether the current noise characteristic is within a comparison level of a previous noise characteristic. When the determination is that the current noise characteristic is not within the comparison level of the previous noise characteristic, the modem limits transmitted power by an amount equal to a power cutback value. In this manner, Murphy et al.'s method may allow optimal downstream data transfer regardless of what model of non-linear device shares the customer loop with the ADSL modem.

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With respect to the rejection of claim 1, applicant agrees with the examiner's statement on pages 2-3 of the office action of 4/6/2005, that the Zuranski et al. reference "does not teach a reporting unit for sending out said transmission characteristic obtained by said evaluating unit to a network through said analog transmitting unit." Applicant, however, respectfully disagrees with the examiner that the Murphy et al. reference remedies such a limitation.

Specifically, the examiner on page 3 of the office action cites column 7, lines 43-46 of the Murphy et al. reference as teaching the limitation of a "reporting unit for sending out said transmission characteristic obtained by said evaluating unit to a network through said analog transmitting unit." A closer reading of the citation, however, teaches otherwise.

Applicant contends that column 7, lines 43-46 of the Murphy et al. reference merely teaches an ADSL modem 26 (see figure 1 of Murphy et al.) that "measures the total power when it is repeatedly transmitting the thirty-eighth symbol of the R-MEDLEY series of tones because the thirty-eighth symbol has the largest peak-to-average ratio of any of the R-MEDLEY symbols." Hence, it is seen that the Murphy et al. reference merely equates the current noise characteristics as the total power measured by modem 26 while modem 26 is transmitting R-MEDLEY tones.

Conspicuously absent in the Murphy et al. reference, or the Zuranski et al. reference, is a teaching for a reporting unit that sends out an evaluated transmission characteristic to a network through an analog transmitting unit. Applicant contends that there is no need for the setup of Murphy et al. or the setup of Zuranski et al. to send out characteristic evaluation results obtained

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by the subscriber's side over a network, because such characteristic evaluation results, in both Murphy et al. and Zuranski et al., are merely used to control internal parts of an xDSL modem (such as in setting equalizers). For example, the examiner is directed to column 12, lines 30-48 of the Zuranski et al. reference which states that "from this analysis, line characterization circuit 104 can generate equalizer control signals for equalizer 98 (e.g., tap coefficients) which allows modem 54 to adapt to line characteristics of line 52." Similarly, the examiner is directed to column 2, lines 19-25 of the Murphy et al. reference, which states that the current noise characteristic measured by the ADSL modem is used to "limit[s] transmitted power by an amount equal to a power cutback value." As mentioned earlier both the Murphy et al. and Zuranski et al. references fail to teach or suggest reporting such characteristic evaluation results (that are evaluated at the subscriber's side) to a network through an analog transmitting unit.

If the examiner still feels that such limitations (such as the limitation of reporting characteristic evaluation results that are evaluated at the subscriber's side to a network through an analog transmitting unit) are disclosed in the Murphy et al. and Zuranski et al. references applicant respectfully reminds the examiner that it is the duty of the examiner to specifically point out each and every limitation of a claim being rejected as per §1.104(c)(2) of Title 37 of the Code of Federal Regulations and section 707 of the M.P.E.P., which explicitly states that "the particular part relied on must be designated" and "the pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified".

Hence, applicant contends that the combination of the Zuranski and Murphy references fail to provide many of the limitations of applicant's pending claims. Therefore, it is respectfully requested that the rejection with respect to independent claim be withdrawn.

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The above-mentioned arguments with respect to independent claim 1 substantially apply to dependent claims 2-4 and 6 as they inherit all the limitations of the claim from which they depend (i.e., independent claim 1).

Additionally, with respect to claims 2-4, the examiner relies on Zuranski et al. as teaching many of applicant's claimed limitations. Applicant's invention, as claimed in claims 2-4, teaches the utilization of existing functions in current switchboards to which xDSL modems on the subscriber's side are directly connected. Zuranski et al., on the other hand, discloses an xDSL modem on the switchboard's side that generates and outputs a complicated test signal. Applicant contends that generating and outputting this type of test signal cannot be realized using existing functions in current switchboards. Therefore, applicant contends that the combination of the Zuranski et al. and Murphy et al. references fail to teach or suggest the limitations of rejected claims 2-4.

With respect to claim 6, the examiner relies on the Murphy et al. reference as teaching many of applicant's claimed limitations. However, applicant contends that Murphy et al. fails to at least teach or suggest the limitation of the periodicity examining unit that examines noise for whether or not they have periodicity, which in effect becomes a barometer for judging whether or not the influences from crosstalks from ISDN lines can be ignored. However, in Murphy et al. the reference, the examiner's citation merely discloses performing optimization by repeatedly measuring noise characteristics, and fails to teach or suggest examining "periodicity" of noise.

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Hence, applicant contends that the combination of the Zuranski and Murphy references fail to provide many of the limitations of applicant's pending claims. Hence, applicant respectfully requests the examiner to withdraw the rejections with respect to claims 1, 2-4, and 6.

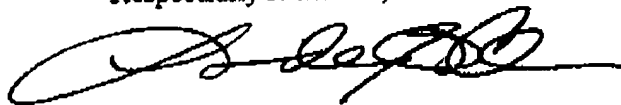
#### SUMMARY

As has been detailed above, none of the references, cited or applied, provide for the specific claimed details of applicant's presently claimed invention, nor renders them obvious. It is believed that this case is in condition for allowance and reconsideration thereof and early issuance is respectfully requested.

This amendment is being filed with a petition for extension of time. The Commissioner is hereby authorized to charge the petition fee, as well as any deficiencies in the fees provided to Deposit Account No. 50-1290.

If it is felt that an interview would expedite prosecution of this application, please do not hesitate to contact applicant's representative at the below number.

Respectfully submitted,



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